

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

Wireless Telecommunications Bureau )  
Seeks Comment on New Implementation ) CC Docket No. 94-102  
Deadline for TTY Access to Digital )  
Wireless Systems for 911 Calls )

**REPLY COMMENTS OF  
SOUTHERN LINC®**

Southern Communications Services, Inc. d/b/a/ Southern LINC® ("Southern"), through its undersigned counsel, respectfully submits these reply comments in response to the *Public Notice* released by the Wireless Telecommunications Bureau ("WTB") in the above-captioned proceeding.<sup>1</sup> For the reasons more fully set forth below, Southern submits that the deadline of December 31, 2001, proposed by the Federal Communications Commission ("FCC" or "Commission") for implementation of the text telephone ("TTY") solution on its digital iDEN system is not achievable, and thus this deadline should not be adopted. Southern also submits that in the place of monitoring or reporting requirements, as proposed in the *Public Notice*, the Commission should rely upon the TTY Forum as a mechanism for tracking broad industry progress – by handset manufacturers, network infrastructure vendors and carriers – towards the implementation of TTY functionality into all digital systems. Finally, Southern offers its thoughts on potential consumer impact.

Southern, a wholly-owned subsidiary of Southern Company, operates a unique digitally enhanced, wide-area Specialized Mobile Radio (SMR) system in the Southeastern United States.

<sup>1</sup> See *Wireless Telecommunications Bureau Seeks Comment on New Implementation Deadline for TTY Access to Digital Wireless Systems for 911 Calls*, DA 00-1091, released May 17, 2000 ("Public Notice").

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Southern provides dispatch, text messaging, paging, interconnected voice and Internet service using a digital handset. Southern's system is the largest centrally switched, state-of-the-art digital 800 MHz SMR system in the world, with an authorized service area of more than 127,000 square miles. The system provides internal communications to Southern's parent company's five operating utilities and to a large, growing external customer base.

Southern's wide-area SMR system employs Motorola's Integrated Digital Enhanced Network technology ("iDEN"), a digitally-enhanced, time division multiple access technology. Southern has a continuing interest in this proceeding, as it will be required to modify its digital wireless system to comply with the Commission's TTY rules. Southern has reviewed the comments filed in the above captioned proceeding and offers the following comments in reply.

### **DISCUSSION**

With regard to the proposed implementation date of December 31, 2001, Southern agrees with many commenters that this deadline is not achievable.<sup>2</sup> In this vein, Southern also concurs with commenters such as Nextel who believe that it is premature to establish this date as the industry deadline. The selection of this date is premised upon the Lucent TTY solution. While this solution represents a significant technological breakthrough in the path to compliance with the TTY requirement, much work remains to be done. As developed, the Lucent solution is not necessarily compatible with all digital networks. Moreover, the development of the Lucent solution is only the beginning step for TTY implementation. The research and development stage will continue for both handset and network equipment manufacturers as well as for wireless carriers. The manufacturers and carriers will need to adapt and implement Lucent's TTY solution into platforms that differ technologically from the platform that was initially used to develop this solution. Therefore, the Commission should not establish a deadline for TTY implementation until wireless equipment vendors and wireless carriers are able to determine a more accurate timetable to develop and deploy a TTY solution.

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<sup>2</sup> See, e.g., Comments of AT&T, CTIA, Motorola, Nextel, Rural Cellular Association and Sprint PCS.

With regard to Southern's case, it uses Motorola proprietary iDEN equipment for both its handsets and network infrastructure. Thus it is wholly dependent on Motorola for the development of a technology solution for TTY implementation. Regarding iDEN technology, Motorola stated that it "is developing a voice-path solution modeled after the Lucent TTY solution."<sup>3</sup> Since Lucent presented its TTY solution at the Wireless TTY Forum in January of 1999, Motorola has been working to adapt the solution for use with its iDEN technology, and Motorola has stated that significant alterations will be necessary to do so.

For example, according to Motorola: "iDEN technology is significantly different from other air interfaces. These differences result in the requirement that Motorola make substantial adaptations to the Lucent TTY solution to support its use on the iDEN platform. Differences include the type of vocoder used – which is at the heart of the 'Lucent Solution;' how data is passed within the voice packets, the protocols that tie the voice packets together; and a different tone detection scheme to recognize the Baudot tones."<sup>4</sup>

Presently, Motorola is in the process of simulating and testing a solution based on the Lucent TTY technology but cautions that significant work still remains.<sup>5</sup> Only after Motorola has completed its adaptation of the Lucent solution to iDEN technology will Southern be able to implement the new technology within its network. Implementation will involve Southern's own "real world" tests, along with deployment throughout its network, a process which could take up to 12 months.

In light of the work that remains to be done by Motorola to adapt the Lucent solution for iDEN technology, as well the time Southern will need to implement the final solution in its network, Southern respectfully submits that the proposed December 31, 2001 deadline is not achievable for an iDEN carrier such as itself. In doing so, Southern concurs with the comments of Nextel and Motorola on this matter. Once Motorola has made further progress in adapting the

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<sup>3</sup> Motorola Comments at 4.

<sup>4</sup> *Id* at 5.

<sup>5</sup> *Id*.

Lucent solution to iDEN technology, Southern will be better able to project an achievable timetable for its TTY implementation.

Furthermore, many commenters, speaking from the perspective of other digital technologies, also state that this proposed deadline is not achievable. Thus, Southern is not in a unique situation in its inability to implement TTY capability by December 31, 2001. Only one commenter, SBC Wireless, believes that it could meet this deadline, but it hedges that commitment with caveats regarding the tightness of the timetable to meet this date, the lack of any leeway for unanticipated issues, and their dependency upon commitments that must be met by infrastructure and handset vendors in order to meet the proposed deadline.<sup>6</sup>

Southern also believes that CTIA raises a very important issue regarding the cumulative effect of regulatory deadlines. As CTIA rightfully urges, the Commission should take into account all of the regulatory deadlines currently being imposed on wireless systems operators, including TTY, CALEA and E911 Phase II, in considering a timetable in this proceeding.<sup>7</sup> CALEA imposes major system modification requirements on wireless carriers that must be addressed in the same period as the Commission's proposed digital TTY deadline of December 31, 2001. Like CTIA, Southern believes that wireless carriers are working diligently to comply with all of these regulatory mandates. However, there is concern as to whether system modifications can realistically be accomplished to meet all of these deadlines.

Commenters in this proceeding also responded to the issue of whether the Commission should adopt additional requirements to monitor carrier progress, such as industry reports or carrier implementation plans. Southern concurs with the many commenters who believe that such an approach would not be beneficial and would divert energy and resources away from TTY implementation. It also concurs with the recommendation of many commenters that the Commission should continue to monitor the progress towards TTY implementation through the

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<sup>6</sup> SBC Wireless Inc. Comments at 1-2.

<sup>7</sup> CTIA Comments at 4.

Wireless TTY Forum. By doing so, the Commission can continue to obtain information from all parties who must play a role in TTY implementation, rather than relying on one particular group, such as carriers, to periodically inform the Commission of the entire industry's progress.

Finally, Southern believes the Commission should be aware of the potential consumer impact of the TTY solution. Since the Lucent solution will affect the process for encoding the voice channel on the iDEN system, significant testing will be needed to ensure that voice quality for Southern's customers is not adversely affected. Motorola's comments discuss a concern for audio degradation resulting from the potential for false detection of TTY tones on the network that may affect all customers, hearing impaired or not.<sup>8</sup> In its comments, Nextel acknowledges that these iDEN system modifications may potentially impact voice quality over their system.<sup>9</sup> Southern shares the concern that the vocoder modifications have the potential to impact voice quality for *all* users on its network. Southern cannot meaningfully evaluate this potential consequence until the iDEN-specific technology solution is tested in its network. The goal of carriers, handset manufacturers, and infrastructure suppliers should be a TTY solution that serves the needs of TTY end users and is reliable as well. Rushing to implement a solution serves no one well. Without sufficient adaptation, adequate testing, and thorough integration into handsets and carrier networks, the TTY end users will likely receive a solution that frustrates rather than satisfies them. And, along with a carrier's broad customer base, they may suffer from unintended consequences such as a negative impact on voice quality. Because of these concerns, the Commission must give carriers and their vendors a realistic amount of time to test and refine TTY solutions.

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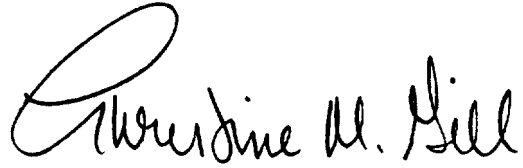
<sup>8</sup> Motorola Comments at 6.

<sup>9</sup> Nextel Comments at 4.

**CONCLUSION**

**WHEREFORE, THE PREMISES CONSIDERED**, Southern urges the Commission to consider these reply comments and proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

A handwritten signature in black ink, reading "Christine M. Gill". The signature is written in a cursive style with a large, looping initial "C".

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Christine M. Gill  
Carole C. Harris  
Sondra T. Mendelson\*  
*Attorneys for*  
*Southern Communications Services, Inc.*

Michael D. Rosenthal  
*Director of Regulatory Affairs*  
*Southern Communications Services, Inc.*

*\* Admitted in Maryland only*

July 19, 2000